09/08/60 JC535 U.S. PTO

Box Patent Application
Commissioner of Patents
and Trademarks
Washington, DC 20231

JC836 U.S. PTO 09/658632 09/08/00

NEW APPLICATION TRANSMITTAL

Transmitted herewith for filing is the patent application of

Inventor(s): Megiddo et al.

WARNING: Patent must be applied for in the name(s) of all of the actual inventor(s). 37 CFR 1.41(a) and 1.53(b).

For (title): A System and Method for Improving the Effectiveness of Web Advertising

1. Type of Application

This new application is for a(n) (check one applicable item below):

_X_ Utility

___ Design

___ Plant

NOTE: If one of the following 3 items apply them complete and attach ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF A PRIOR U.S. APPLICATION CLAIMED and a NOTIFICATION IN PARENT APPLICATION OF THE FILING OF THIS CONTINUATION APPLICATION.

___ Divisional

___ Continuation

___ Continuation-in-part (CIP)

2. Benefit of Prior U.S. Application(s) (35 USC 120)

NOTE: If the new application being transmitted is a divisional, continuation or a continuation-in-part of a parent case, or where the parent case is an International Application which designated the U.S., then check the following item and complete and attach ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICATION(S) CLAIMED.

___ The new application being transmitted claims the benefit of prior U.S. application(s) and enclosed are ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICATION(S) CLAIMED.

3. Papers Enclosed Which Are Required For Filing Date Under 37 CFR 1.53(b) (Regular) or 37 CFR 1.153 (Design) Application

_11_ Pages of Specification and Abstract

_7_ Pages of Claims

_5_ Sheets of drawing(s)

_X_ Formal

___ Informal

NOTE: "Identifying indicia such as the serial number, group and unit, title of the invention, attorney's docket number, inventor's name, number of sheets, etc., not to exceed 2 3/4 inches (7.0cm in width may be placed in a centered location between the side edges within three fourths inch (19.1mm) of the top edge. Either this marking technique on the front of the drawing or the placement, although not preferred, of this information and the title of the invention on the back of the drawings is acceptable." Proposed 37 CFR 1.84(1). Notice of March 9, 1988 (1090 O.G. 57-62).

4. Additional Papers Enclosed

___ Preliminary Amendment

___ Information Disclosure Statement (37 CFR 1.98)

___ Form PTO-1449

___ Citations

___ Declaration of Biological Deposit

___ Submission of "Sequence Listing," computer readable copy and/or amendment pertaining thereto for biotechnology invention containing nucleotide and/or amino acid sequence.

___ Authorization of Attorney(s) to Accept and Follow Instructions from Representative

___ Special Comments

___ Other

5. Declaration or Oath

_X_ Enclosed
executed by (check all applicable boxes)

_X_ inventor(s).

___ legal representative of inventor(s). 37 CFR 1.42 or 1.43

___ joint inventor or person showing a proprietary interest on behalf of inventor who refused to sign or cannot be reached.

___ this is the petition required by 37 CFR 1.47 and the statement required by 37 CFR 1.47 is also attached. See Item 13 below for fee.

___ Not Enclosed

___ Application is made by a person authorized under 37 CFR 1.41(c) on behalf of all the above named inventor(s). (The declaration or oath, along with the surcharge required by 37 CFR 1.16(e) can be filed subsequently).

NOTE: It is important that all the correct inventor(s) are named for filing under 37 CFR 1.41(c) and 1.53(b).

___ Showing that the filing is authorized. (Not required unless called into question. 37 CFR 1.41(d).

6. Inventorship Statement

WARNING: If the named inventors are each not the inventors of all the claims an explanation, including the ownership of the various claims at the time the **last** claimed invention was made, should be submitted.

The Inventorship for all the claims in this application are:

_X_ the same

or

___ are not the same. An explanation, including the ownership of the various claims at the time the last claimed invention was made.

___ is submitted

___ will be submitted

7. Language

_X_ English

___ non-English

___ The attached translation is a verified translation. 37 CFR 1.52(d).

8. Assignment

_X_ An assignment of the invention to INTERNATIONAL BUSINESS MACHINES CORPORATION

_X_ is attached. A separate

_X_ "COVER SHEET FOR ASSIGNMENT (DOCUMENT) ACCOMPANYING NEW PATENT APPLICATION" or

___ FORM PTO 1595 is also attached.

___ will follow.

NOTE: "If an assignment is submitted with a new application, send two separate letters-one for the application and one for the assignment." Notice of May 4, 1990 (1114 O.G. 77-78).

9. Certified Copy (35 USC 119)

Certified copy(ies) of application(s):

(country)	(appln. no.)	(filed)
(country)	(appln. no)	(filed)

from which priority is claimed

___ is/are attached.

___ will follow.

10. Fee Calculation (37 CFR 1.16)

A. _X_ Regular application

CLAIMS AS FILED						
Number filed			**Num. Extra**		**Rate**	**Basic Fee $690.00**
Total Claims	**21**	**-20=**	1	**X**	**$18.00**	**$18.00**
Independent Claims	**4**	**-3=**	1	**X**	**$78.00**	**$78.00**
Multiple dependent claim(s), if any	0			**X**	**$260.00**	**$0.00**

___ Amendment canceling extra claims enclosed.

___ Amendment deleting multiple dependencies enclosed.

___ Fee for extra claims is not being paid at this time.

NOTE: If the fees for extra claims are not paid on filing, they must be paid or the claims cancelled by amendment, prior to the expiration of the time period set for response by the Patent and Trademark Office in any notice of fee deficiency. 37 CFR 1.16(d).

Filing Fee Calculation $ 786.00

B. ___ Design application
($310.00--37 CFR 1.16(f))
Filing Fee Calculation $_____

C. ___ Plant application
($480.00--37 CFR 1.16(g))
Filing Fee Calculation $_____

11. Small Entity Statement(s)

___ Verified Statement(s) that this is a filing by a small entity under 37 CFR 1.9 and 1.27 is/are attached.

Filing Fee Calculation (50% of A, B or C above) $_____

12. Request for International-Type Search (complete, if applicable)

___ Please prepare an international-type search report for this application at the time when national examination on the merits takes place.

13. Fee Payment Being Made At This Time

___ Not Enclosed

___ No filing fee is to be paid at this time. (This and the surcharge required by 37 CFR 1.16(e) can be paid subsequently.)

_X_ Enclosed

_X_	basic filing fee	$ 786.00
_X_	recording assignment ($40.00; 37 CFR 1.21(h))	$ 40.00
___	petition fee for filing by other than all the inventors or person on behalf of the inventor where inventor refused to sign or cannot be reached. ($130.00; 37 CFR 1.47 and 1.17(h))	$_____
___	for processing an application with a specification in a non-English language. ($130.00; 37 CFR 1.52(d) and 1.17(k))	$_____
___	processing and retention fee ($130.00; 37 CFR 1.53(d) and 1.21(l))	$_____
___	fee for international-type search report ($40.00; 37 CFR 1.21(e))	$_____
	Total fees enclosed	**$ 826.00**

14. Method of Payment of Fees

_X_ Check in the amount of $ 826.00 _____.

___ Charge Account No. 12-0010 in the amount of $_____. A duplicate of this transmittal is attached.

NOTE: Fees should be itemized in such a manner that it is clear for which purpose the fees are paid.

15. Authorization to Charge Additional Fees

WARNING: If no fees are to be paid on filing, the following items should not be completed.

WARNING: Accurately count claims, especially multiple dependent claims, to avoid unexpected high charges, if extra claim charges are authorized.

_X_ The Commissioner is hereby authorized to charge the following additional fees by this paper and during the entire pendency of this application to Account No. 12-0010 :

___ 37 CFR 1.16(a), (f) or (g) (filing fees)

___ 37 CFR 1.16(b), (c) or (d) (presentation of extra claims)

_X_ **Any deficiencies in the fees provided.**

NOTE: Because additional fees for excess or multiple dependent claims not paid on filing or on later presentation must only be paid or these claims cancelled by amendment prior to the expiration of the time period set for response by the PTO in any notice of fee deficiency, it might be best not to authorize the PTO to charge additional fees, except possibly when dealing with amendments after final action.

___ 37 CFR 1.16(e) (surcharge for filing the basic filing fee and/or declaration on a date later than the filing date of the application.)

___ 37 CFR 1.17 (application processing fees)

___ 37 CFR 1.18 (issue fee at or before mailing of Notice of Allowance, pursuant to 37 CFR 1.311(b)).

16. Instruction As To Overpayment

_X_ credit Account No. 12-0010

___ refund

Reg. No. 34,368
Tel. No. (703) 415-1015

SIGNATURE OF APPLICANT'S REPRESENTATIVE
Randy W. Lacasse

Lacasse & Associates
2001 Jefferson Davis Hwy, Suite 806
Arlington, VA 22202

X **Incorporation by reference of added pages**

Check the following item if the application in this transmittal claims the benefit of prior U.S. application(s) (including an international application entering the U.S. stage as a continuation, divisional or C-I-P application) and complete and attach the ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICATION(S) CLAIMED.

___ Plus added pages for new application transmittal where benefit of prior U.S. application(s) claimed.

Number of pages added _____

___ Plus added pages for papers referred to in Item 4 above

Number of pages added _____

X Plus "Assignment Cover Letter Accompanying New Application"

Number of pages added 4 pages

___ **Statement Where No Further Pages Added**

ARC9-2000-0029-US1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION FOR LETTERS PATENT

09605502 : 060500

INVENTOR:

Megiddo et al.

TITLE:

A System and Method for Improving the Effectiveness of Web Advertising

BACKGROUND OF THE INVENTION

Field of Invention

The present invention generally relates to advertising over a network such as the Internet. More specifically, the present invention is related to a method and system for improving the effectiveness of Internet advertising.

Discussion of Prior Art

On-line advertising systems provide advertisements (ads) to users in a variety of formats such as banners that may be displayed at the top or bottom of a web page on the user's browser. Such ads may include scrolled information containing images, texts or objects that change with time. The banner ad serves as an HTML (Hypertext Markup Language) link that allows the user to be linked to a specific web page if the user clicks on the banner ad. The browser accomplishes this by generating a HTTP (Hypertext Transfer Protocol) message using information encapsulated in the banner to send a request for an object with a specific URL (Uniform Resource Locator), for example, the advertisers home page.

Currently, advertising on web pages is essentially related to the content of the page. The returned page may be unique in the sense that it is composed especially for the user and the system decides which advertisements to return together with the page. Due to limited space on the displayed web page and the fact that a web page is only viewed for a short period of time, advertisers try to change the displayed ads quickly. The ads can either be part of one dynamic "gif" (Graphic

Interchange Format) file or an applet which fetches more ads. The problem with this method is that some times a user may indeed be interested in one of the ads but misses it and then has no way of returning to it. The problem is even more severe when the user goes to a first URL, sees an ad there, then goes to a second URL, and then returns to the first URL. By the time the user returns to the first URL, the ad has been replaced and leaves no opportunity for retrieval.

The present invention overcomes the above mentioned drawbacks by providing a method and system that increases the effectiveness of advertising by allowing the user to return and request previously displayed ads that are of interest.

SUMMARY OF THE INVENTION

A system and method for improving the effectiveness of web advertising by allowing a user to return and request a previously displayed ad that appeals to the user. Generally, the system employs an intelligent browser cache maintained within a user's terminal to keep web pages in cache and maintains information about hyperlinks contained therein. Furthermore, the system allows for storing ads in a bookmark memory without clicking on the ads. The bookmark memory is either permanently maintained or temporarily stored for a predetermined period of time in the user's terminal to allow the user the ability to view stored ads at a later time. The system further includes an algorithm for computing the differences between previously viewed pages stored in the intelligent browser cache and a new page (currently viewed page) in terms of their hyperlinks. Presented to the user, in separate windows, are ads from both new and previously viewed (old) pages to aid the user in deciding whether to click and visit a different page or to save the displayed page for later use. Finally, the system permits the user to request ads previously displayed at a particular position by pointing (with a mouse) to the current ad at such a location.

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 illustrates the general environment for on-line advertising system.

Figure 2 illustrates user's terminal.

Figure 3a illustrates a flow diagram depicting steps for retrieving and computing the differences between the new and old web pages.

Figure 3b illustrates the outline of a web page showing a plurality of ad windows.

Figure 4 illustrates a flow diagram of identifying an expiration date.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

While this invention is illustrated and described in a preferred embodiment, the device may be produced in many different configurations, forms and materials. There is depicted in the drawings, and will herein be described in detail, a preferred embodiment of the invention, with the understanding that the present disclosure is to be considered as a exemplification of the principles of the invention and the associated functional specifications and is not intended to limit the invention to the embodiment illustrated. Those skilled in the art will envision many other possible variations within the scope of the present invention.

Figure 1 illustrates a general environment **100** for the present invention. Internet **106** comprises a group of networks that are interconnected so that they appear to be one continuous large network. Individuals can access remote servers to obtain information over the Internet with a conventional browser contained within user's terminal **102** and an associated ISP (Internet Service

Provider) **104**. Exemplary ISP **104** may be, for example, on-line computer services/portals such AOL®, Compuserve ®, Netcom ®, Msnetwork ®, Yahoo ®, etc., that provide e-mail; forums; software downloads; news; weather; sports; financial; or other like information; e-commerce; on-line gaming; or other features over the Internet to its subscribers. Web site **116** with at least one web server (not shown) is in communication with the Internet and responds to a request from user's terminal **102** via ISP **104**. Responses may include, for example, but not limited to files or information from at least one database (not shown) contained within the web site **116**. Furthermore, web site **116** typically is linked to ad web site **108**. Ad web site **108** includes ad server **110** that retrieves one or more ads from ad database **112** in the form of a banner or other equivalent types of Internet ads that contain a HTML link. The ad is to be displayed when a page of information such as file or database information is returned to user terminal **102**. Ad web site **108** further includes ad manager **114** that controls and runs ad server **110** and ad database **112**. Controlling ad server **110** and ad database **112** includes, but is not limited to, the following functions: receiving statistical information from ad server **110** which indicates what ads have actually been served, profiling intelligent selection, configuring the statistics from the ad server and providing such information to ad database **112**. Additionally, in an alternate embodiment, ad web site **108** is accommodated within web site **116**.

Figure 2 further defines the user's terminal **102** as including Internet communication software **201** such as offered by Netscape ® which comprises browser **202**. Also included with user's terminal **102** is intelligent browser cache **204** and bookmark memory **206.** Intelligent browser cache

204 may be, for example, but not limited to the following in nature: real, virtual or physical. In addition, the present invention should not be limited based on the location of intelligent browser cache **204**. The intelligent cache system employed by browser **202** stores web pages in cache and also maintains information about hyperlinks contained in these pages. Moreover, the intelligent cache system pays attention to (monitors) pages that are designed by their authors to refresh each time they are requested or at short time intervals. Figure 4 and the corresponding discussion below describe how the system pays attention to author's pages. The META element of an HTML document is often used to identify an expiration date **400**. For example the following META declaration:

<META http-equiv="Expires" content="Mon, 1 May 2000 01:00:00 GMT">

can be used by caches to determine when to fetch a fresh copy of the associated document. Another example of a META declaration is:

<META http-equiv="refresh" content="60">

which is often used by the browser to repeatedly fetch a fresh copy of the associated document every 60 seconds.

A page that does not expire and does not need to be refreshed is placed in cache, and so are all the references and ads included in that page. Thus, when retrieved from cache, such a page displays the same ads. A clickable ad is described in the HTML source file as in the following example:

<A HREF =

"http://ad.doubleclick.net/jump/homepgtable.av.com/fullbanner;sz=468x60;ord=130914492?">

<IMG SRC =

"http://ad.doubleclick.net/ad/homepgtable.av.com/fullbanner;sz=468x60;ord=130914492?"border=0

height=60 width=468>

</A>

The browser displays the image whose URL is:

http://ad.doubleclick.net/ad/homepgtable.av.com/fullbanner;sz=468x60;ord=130914492?

If the user clicks the mouse on the displayed ad, the browser fetches and displays the image whose URL is:

http://ad.doubleclick.net/jump/homepgtable.av.com/fullbanner;sz=468x60;ord=130914492

The system of present invention recognizes pages that need to be refreshed **402** and preserves their ads in cache **404** in case the user wishes to see them later.

Furthermore, the intelligent cache system keeps and indexes the hyperlinks contained in such pages. While the user navigates through a web site, ads contained within the web pages are automatically saved to bookmark memory **206** without adding, clicking, or indicating to view any particular ad. This feature creates a significant advantage over conventional browsers in the sense that it allows for an individual that may not want to interrupt the main task being performed, but would like to see the ad later and navigate to a new page. Bookmark memory **206** is permanently

maintained or temporarily stored for a predetermined period of time, and enables the user to view all the ads that were previously saved. The bookmark memory is maintained as a file, which is stored in the disk drive of the user's computer system. It is up to the user to choose for how long to keep the ads. The decision reflects the tradeoff between the desire to be able to retrieve as many ads as possible and the limited storage space. An illustration of the detection of changes in web pages is described in Figures 3a-3b.

Figure 3a illustrates a flow diagram **300** depicting steps for retrieving and computing the difference between new and old web pages. In step **302**, an individual visits a first URL 1 via Internet communication software **201** as described above in figures 1&2, the system proceeds to store link information pertinent to banner ads contained within said first URL 1 in intelligent browser cache **204** as illustrated in step **304**. In step **306,** the individual visits a second URL 2 and as previously discussed, intelligent browser cache **204** maintains information related to banner ads contained within the second URL 2. In step **308**, the individual revisits the first URL 1. The system therefore in step **310,** fetches one or more previous pages associated with (URL 1) from cache and proceeds in step **312** to compute the difference between the previously stored web page(s) (URL1) and the new web page(s) (URL2) in terms of their hyperlinks. In step **314**, the system displays one or more windows of ads, both from the old and new web pages. An illustration of such a display is shown in Figure 3b where old ads are represented in window **320** and the new ads are represented in window **322**. Specific ad window sizes, placement or the number thereof are not critical to practicing of the invention. For instance, ads could also be displayed in sorted order based on words in the links or words displayed. Referring back to figure 3a, in step **316,** the user selects an ad from

the displayed windows in figure 3b. The system in step **318** therefore proceeds to connect the user to ad web site **108.** In an alternate embodiment, after step **314** the system presents the user with a choice of either clicking and visiting a different page, or saving the newly generated page for later use.

Finally, the system allows for the retrieval of old ads based on the user's request. The mouse is positioned on the location, so that mouse coordinates are recognized. Alternately, the system can present to the user a clickable small square where a click of the mouse would cause the system to fetch all the ads that were displayed in that location of a page with the same URL. As described above, when the system saves hyperlinks of pages that are designated to refresh in the intelligent browser cache, the system also allows the user to indicate, with the mouse positioned on a current ad, that the user is interested in ads that were previously displayed in the same position. Based on the mouse position, the system fetches from the intelligent browser cache the old hyperlinks to ads that were displayed in the same position, and redisplays them to the user.

The above enhancements to improving the effectiveness of web advertising and its described functional elements are implemented in various on-line web advertising systems. For example, the present invention may be implemented from a web site that contains its own ad server or a web site that is linked to a third party advertising web site. The present invention may be implemented on a conventional Internet communication software or browser.

CONCLUSION

A system and method has been shown in the above embodiments for the effective implementation of improving the effectiveness of Internet advertising. While various preferred embodiments have been shown and described, it will be understood that there is no intent to limit the invention by such disclosure, but rather, it is intended to cover all modifications and alternate constructions falling within the spirit and scope of the invention, as defined in the appended claims. For example, the present invention should not be limited by types of ads, number of ads stored, method of storing, size, location or type of cache or software/program, computing environment, or specific computing hardware.

CLAIMS

1. A method for enhancing the effectiveness of on-line advertising, said on-line advertising performed over a communications network including one or more of: a web site, an ad web site that includes an ad database, at least one remote terminal, and a communication network interconnecting said web site, ad web site and said remote terminal, said method comprising the following steps:

processing a request of one or more web pages from said web site;

receiving one or more ads associated with each of said one or more web pages and displaying said one or more web pages and associated ads at said remote terminal;

retaining in computer storage said one or more ads associated with each of said one or more web pages displayed, and

wherein said ads retained in said computer storage are retrievable at said remote terminal thereby enhancing the effectiveness of said on-line advertising.

2. A method for enhancing the effectiveness of on-line advertising, as per claim 1, wherein said remote terminal is operatively connected to a browser, a bookmark memory and an intelligent browser cache, at least said intelligent browser cache retained with said computer storage.

3. A method for enhancing the effectiveness of on-line advertising, as per claim 2, wherein said intelligent browser cache stores said one or more web pages displayed and maintains information about hyperlinks contained in said web pages.

4. A method for enhancing the effectiveness of on-line advertising, as per claim 2, wherein said bookmark memory saves said ads at said remote terminal.

5. A method for enhancing the effectiveness of on-line advertising, as per claim 4, wherein said bookmark memory is either permanently maintained or temporarily kept for a predetermined period of time.

6. A method for enhancing the effectiveness of on-line advertising, as per claim 2, wherein the differences between a new page and a previously viewed web page are determined in terms of their associated hyperlinks.

7. A method for enhancing the effectiveness of on-line advertising, as per claim 1, wherein said ads from said new page and said previously viewed web pages are displayed at said remote terminal in one or more windows.

8. A method for enhancing the effectiveness of on-line advertising, as per claim 1, further comprising displaying previous position specific ads upon receiving a selection of a corresponding position of advertising in a presently displayed web page.

9. A method for enhancing the effectiveness of on-line advertising, as per claim 1, wherein said on-line advertising may be implemented locally or remotely on one or more computer-based systems, across networks or communication mediums.

10. A method for enhancing the effectiveness of on-line advertising, as per claim 1, wherein said communication network comprises any of LANs, WANs, Internet or Web-based networks.

11. A system for retrieving previously viewed Internet web-advertising comprising:

a requestor terminal receiving one or more web pages from a remote web site;

said web pages including one or more ads retrieved from an ad web site associated with said web site, said ad web site comprising any of: an ad server, ad database and ad manager,

a display presenting said one or more web pages and one or more ads;

computer storage retaining said one or more retrieved ads and associated hyperlink information, and

wherein said retained ads are retrieved from said computer storage upon request and displayed at said requestor terminal.

12. A system for retrieving previously viewed web-advertising, as per claim 11, wherein said system further comprises a browser, a smart browser cache and a bookmark memory, at least said smart browser cache retained with said computer storage.

13. A system for retrieving previously viewed web-advertising, as per claim 12, wherein said smart browser cache performs the computer storage retaining said one or more retrieved ads and associated hyperlink information function.

14. A system for retrieving previously viewed web-advertising, as per claim 12, wherein said bookmark memory is permanently maintained or temporarily kept for a predefined period of time.

15. A system for retrieving previously viewed web-advertising, as per claim 11, further comprising a comparator to determine differences between a new page and a previously viewed web page in terms of their associated hyperlinks.

16. A system for retrieving previously viewed web-advertising, as per claim 11, wherein said ads from said new page and said previously viewed web page is displayed at said requestor terminal in one or more windows.

17. A system for retrieving previously viewed web-advertising, as per claim 11, further comprising retrieving from said computer storage previous position specific ads upon receiving a selection of a corresponding position of advertising in a presently displayed web page.

18. A method for enhancing the effectiveness of on-line advertising, said on-line advertising performed over a communications network including one or more of: a web site, an ad web site that includes an ad database, at least one remote terminal, and a communication network interconnecting said web site, ad web site and said remote terminal, said method comprising the following steps:

processing a request of one or more web pages from said web site using browser software;

receiving one or more ads associated with each of said one or more web pages and displaying said one or more web pages and associated ads at said remote terminal;

retaining in browser cache said one or more ads associated with each of said one or more web pages displayed and maintaining information about hyperlinks contained in said web pages, and

wherein said ads retained in said browser cache are selectively retrievable at said remote terminal thereby enhancing the effectiveness of said on-line advertising.

19. A computer-based e-commerce method for enhancing the effectiveness of on-line advertising, said on-line advertising performed over a communications network including one or more of: a web site, an ad web site that includes an ad database, at least one remote terminal, and a communications network interconnecting said web site, ad web site and said remote terminal, wherein said method comprises a plurality of steps, one or more of said steps implemented locally or remotely across said communications network, said method comprising:

processing a request of one or more web pages from said web site;

receiving one or more ads associated with each of said one or more web pages and displaying said one or more web pages and associated ads at said remote terminal;

retaining in computer storage said one or more ads associated with each of said one or more web pages displayed, and

wherein said ads retained in said computer storage are selectively retrievable at said remote terminal thereby enhancing the effectiveness of said on-line advertising.

20. A computer-based e-commerce method for enhancing the effectiveness of on-line advertising, as per claim 19, further comprising determining differences between a new page and a previously viewed web page of the same URL in terms of their associated hyperlinks, said differences representing new and previously viewed ads associated with said web page.

21. A computer-based e-commerce method for enhancing the effectiveness of on-line advertising, as per claim 20, wherein said ads from said new page and said previously viewed web pages are displayed at said remote terminal in one or more windows.

Serial No. 09/650,295

ABSTRACT OF THE DISCLOSURE

"A System and Method for Improving the Effectiveness of Web Advertising"

A system and method for improving the effectiveness of web advertising by allowing a user to return and request a previously displayed ad that appeals to the user. Generally, the system employs an intelligent browser cache maintained within a user's terminal to keep web pages in cache and maintain information about hyperlinks contained therein. Furthermore, the system allows for the storing of ads in a bookmark memory without clicking on the ads. The bookmark memory is either permanently maintained or temporarily stored for a predetermined time period at the user's terminal to allow the user view all the stored ads at a later time. The system further includes an algorithm for computing the differences between previously visited pages stored in the intelligent browser cache and a new page in terms of their hyperlinks. Presented to the user in separate windows are all the ads from both the old and new pages to aid the user in deciding whether to click and visit a different page or to save the displayed page for later use. Finally, the system permits the user to request for ads previously displayed at a particular position by pointing his mouse to the current ad at such a location.

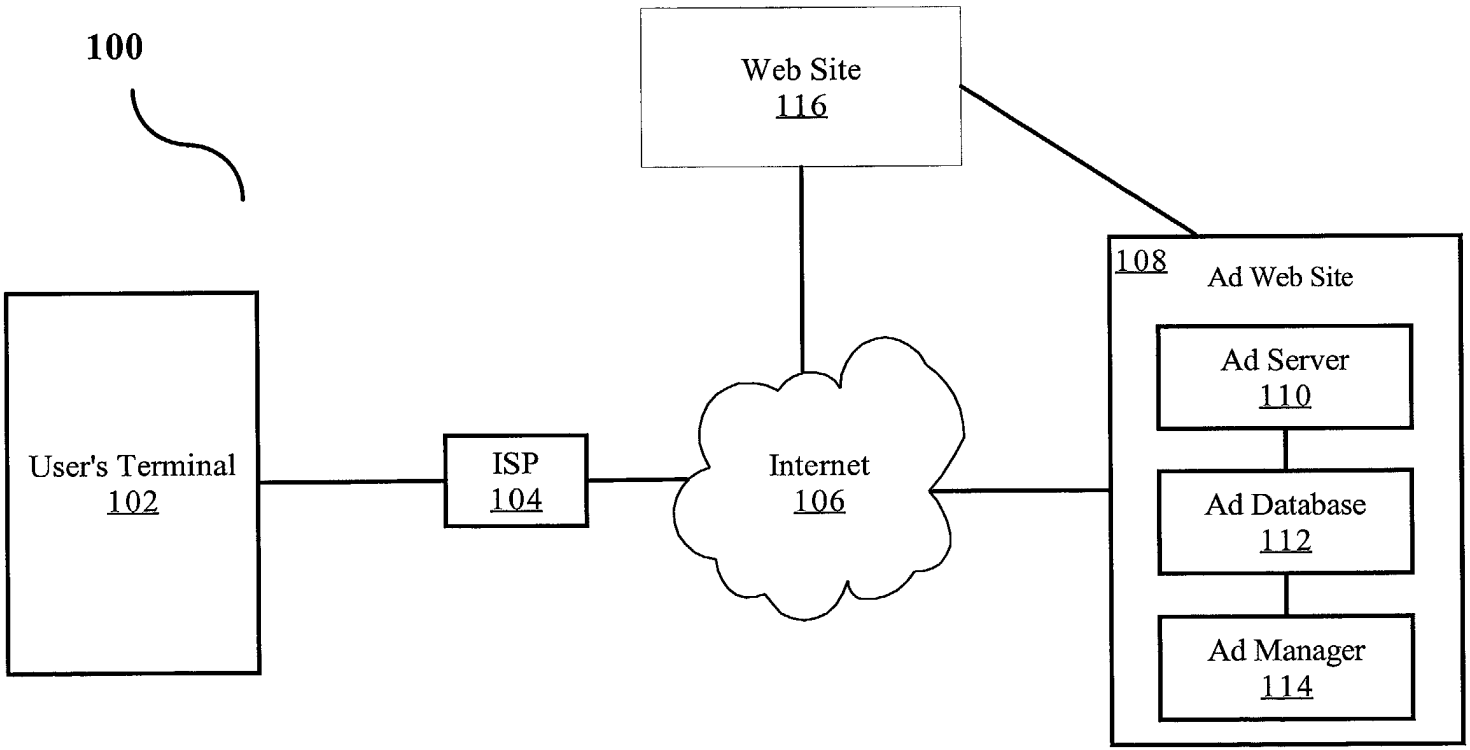
100
Web Site
116
108
Ad Web Site
Ad Server
110
Ad Database
112
Ad Manager
114
User's Terminal
102
ISP
104
Internet
106

Figure 1

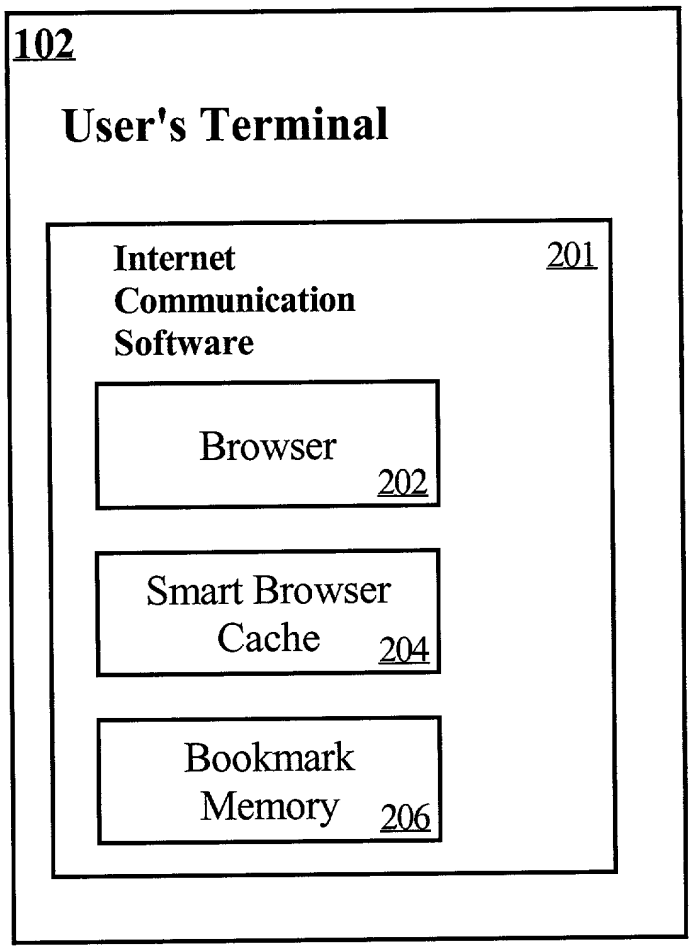
102
User's Terminal
Internet Communication Software
201
Browser
202
Smart Browser Cache
204
Bookmark Memory
206

Figure 2

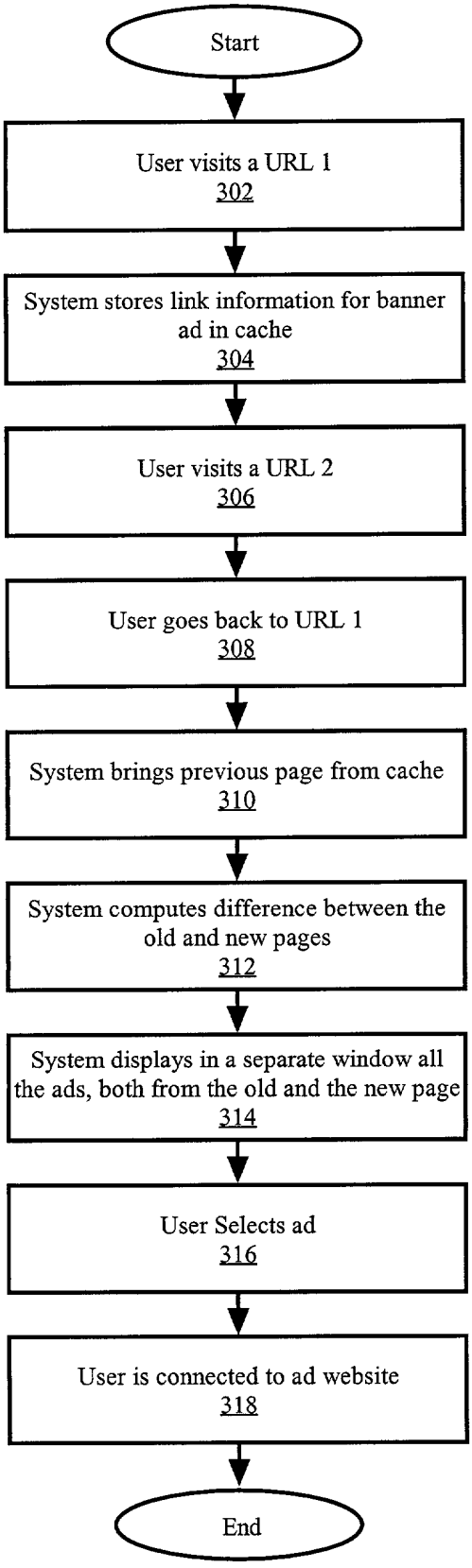
Start
User visits a URL 1
302
System stores link information for banner ad in cache
304
User visits a URL 2
306
User goes back to URL 1
308
System brings previous page from cache
310
System computes difference between the old and new pages
312
System displays in a separate window all the ads, both from the old and the new page
314
User Selects ad
316
User is connected to ad website
318
End
300

Figure 3a

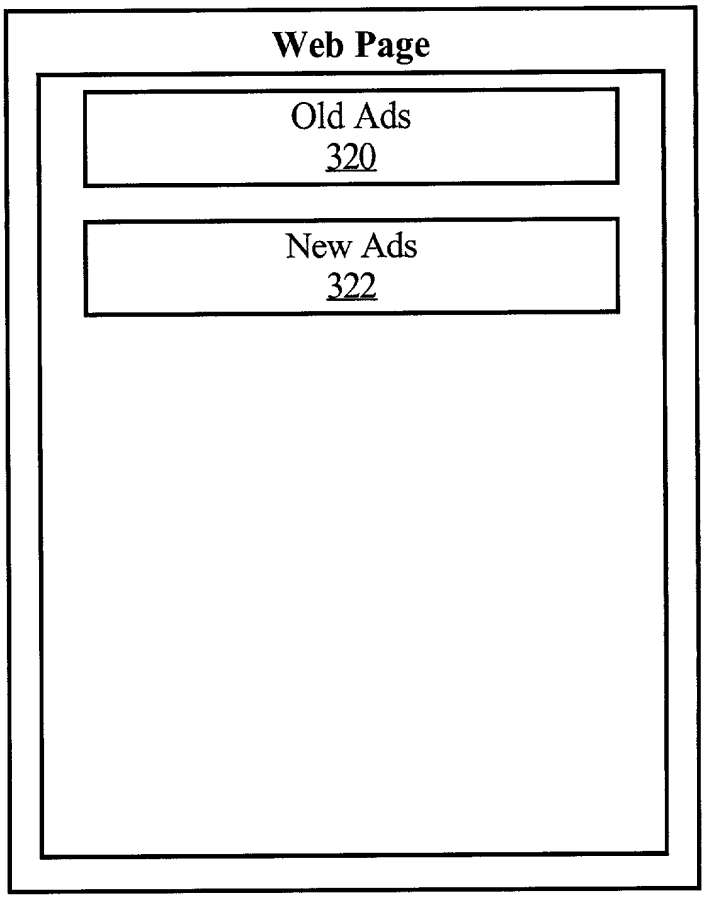

Figure 3b

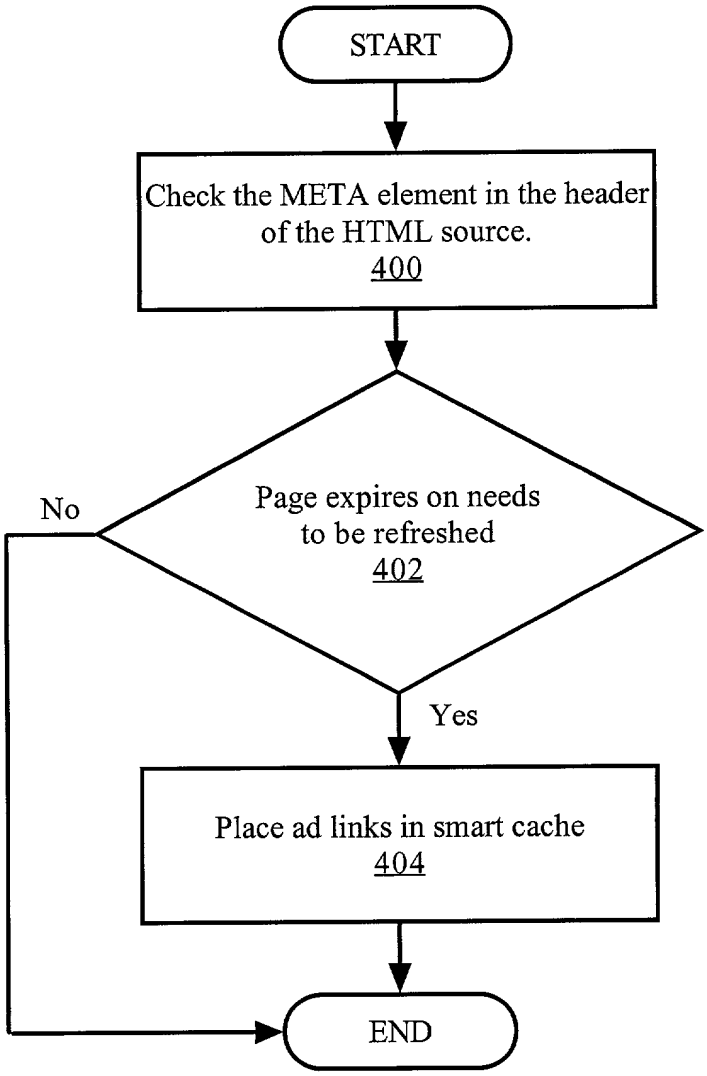
START
Check the META element in the header of the HTML source.
400
Page expires on needs to be refreshed
402
No
Yes
Place ad links in smart cache
404
END

Figure 4

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

DECLARATION FOR PATENT APPLICATION

INVENTOR(S):

Megiddo et al.

TITLE:

A System and Method for Improving the Effectiveness of Web Advertising

DOCKET NO.:

ARC9-2000-0029-US1

TO THE HONORABLE COMMISSIONER OF PATENTS AND TRADEMARKS:

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled, A System and Method for Improving the Effectiveness of Web Advertising, the specification of which is attached hereto.

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, § 119 of any foreign application(s) for patent or inventor's certificate listed below and having also identified below any foreign application for patents or inventor's certificate having a filing date before that of the application on which priority is claimed.

Prior Foreign Applications				
			Priority Claimed:	Y/N
Number	Country	Day/Month/Year Filed		

I hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, § 112. I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56 which became available between the filing date of the prior application and the National or PCT international filing date of this application.

Application No.	Filing Date	Status-patented, pending, abandoned
Application No.	Filing Date	Status-patented, pending, abandoned

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

Randy W. Lacasse	(34,368)	Thomas R. Berthold	(28,689)
Kevin E. Greene	(46,031)	Richard M. Ludwin	(33,010)
Marc D. McSwain	(44,929)	Khanh Q. Tran	(41,352)
Alison D. Mortinger	(39,306)		

Send Correspondence To: Lacasse & Associates
Randy W. Lacasse, Esq.
2001 Jefferson Davis Highway
Suite 806
Arlington, VA 22202

Direct Telephone Calls: (703) 415-1015

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of first joint-inventor: Nimrod Megiddo
Residence: 672 Encina Grande, Palo Alto, CA, 94306, Santa Clara County
Citizenship: USA
Post Office Address: Same as above

Date: 8/3/00 Signature: Nimrod Megiddo

Full name of second joint-inventor: Xiaoming Zhu

Residence: 1407 Heckman Way, San Jose, CA, 95129, Santa Clara County

Citizenship: China

Post Office Address: Same as above

Date: 8/3/00 Signature: X.M. Zhu

Docket No.: 0608.0050US